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AUTHOR Gibson, R. Oliver
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ABSTRACT

It is useful to place the development of educational research within the context of the historical development of scientific research as a whole. The work of Whitehead, Northrop, Toulmin, and, especially, Kuhn suggests the value of viewing research as a social process through which ideas and intellectual techniques are diffused. It is useful for analytical purposes to distinguish between three phases in that process: the period of emergence of community, the transition period, and the period of maturity. The pattern of development in educational administration suggests that the community development period extended up until about 1950 and that the transition period begun in 1950 continues today. The formation of educational administration research organizations and the growing emphasis on analytical techniques suggest that some of the critical components necessary for the emergence of the period of maturity are now developing. (Author/JG)

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TRENDS IN EDUCATIONAL ADMINISTRATION RESEARCH IN THE UNITED STATES

R. Oliver Gibson
State University of New York at Buffalo

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ABSTRACT

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R. Oliver Gibson, State University of New York at Buffalo

A review of research is only too likely to be shaped by personal bias, accidents of available material and time. It is thought to be useful t place this review in the larger context of the development of scientific research and to assess local time and place developments within that framework. The work of Whitehead, Northrop, Toulmin and, more especially, Kuhn suggests the usefulness of viewing scientific research as a social process through which ideas and intellectual techniques are diffused. Drawing to some degree upon Kuhn, it seems useful for analytic purposes to distinguish three phases in those processes: (1) Community Development, (2) Transition and (3) Maturity. In the actual social process the periods are not thought to be sharply marked off but, rather, blended into one another.

The basic conception of a "lawful" order emerged among the Greeks with an emphasis upon rationality; a more empirical emphasis emerged in the Middle Ages; both merged in modern times so that it was possible by the nineteenth century to speak of "scientific research".

Development of community among scientists and the professions was signalled by the emergence of societies and scientific and professional journals, primarily during the nineteenth century and extending through the present. A society with a journal had developed in educational research in the United States by early in the second quarter of the twentieth century and in educational administration by mid-century. Rapid intellectual changes in educational administration during the early 1950's lead to proposing the stage of community development up to 1950, the transition period since 1950 through the present and maturity as an anticipated stage.

Contemporary trends during the transition stage include formation of the University Council for Educational Administration, formation of an educational administration division within the American Educational Research Association, publication of the Educational Administration Quarterly and Educational Administration Abstracts and growing emphasis upon intellectual techniques of analysis reflected in the current publication Futurism in Education. It appears that there has developed a core group of professors with research commitment and that there is a substantial effort to apply theory to data. These trends, although they still lack the desired rigor of quantification, suggest the possibility that in the field of research in educational administration in the United States some of the critical components necessary for emergence of an early stage of maturity are in the process of development.

TRENDS IN EDUCATIONAL ADMINISTRATION RESEARCH IN THE UNITED STATES

R. Oliver Gibson, State University of New York at Buffalo

Introduction

Research in the field of education is so varied and the criteria applied to its evaluation is so dependent upon differing perspectives and, upon the role of knowledge that any general assessment is an extremely hazardous undertaking at best. There are problems of conscious selection of materials, unconscious omission of results, bias stemming from perspective and limitations in the nature and use of the existing information systems. Consequently, this review is presented in a highly tentative mode; it is viewed as primarily exploratory and as a basis for discussion rather than anything approaching a definitive statement of the nature of the field.

If the above statement is in any real way a credible one, it would seem highly important to develop some sort of analytic framework as a means of ordering the great diversity and of proposing a framework within which the diversity may be a bit more manageable and from which groundlines may become a bit more discernible. Here again there is bound to be variety of opinion about the underlying assumptions that inform any such perspective. In the end it will need to be judged on its usefulness and the degree to which it proves in any way heuristic.

It is assumed that trends in research in educational administration occur within the matrix of the thrust of research and knowledge development in modern times and the related developments in the behavioral sciences and in education. Viewed in this way a meteorological metaphor comes to mind in which the central thrust of modern science resembles the dominant "jet stream" and the developments in the several disciplines and professions may be seen as in some way isomorphic with a succession of highs, lows and idiosyncratic local conditions. If this metaphor is assumed to have some utility, it would seem useful to cast the uniqueness of a particular field, in this case educational administration, within the larger framework and then turn to the "eddies" of our own particular field. The thought is that the larger view may help us see ourselves within the latitude and longitude of modern times and open the way to further hypothesizing about whether we may be tending.

Utilizing the above framework, this paper will first develop a view of the emergence of scientific research in modern times, will then go on to set the field of educational administration within that framework followed by some comments upon major contemporary trends culminating in some highly tentative speculations about possible extrapolation into the future.

Background

The human effort to understand, predict and control is a quest that is still very imperfectly understood. Suggestive analyses are those by Whitehead in Science and the Modern World (17), Northrop in The Logic of the Sciences and the Humanities (13), Madden in Theories of Scientific Method (12), Kuhn in The Structure of Scientific

Revolutions (11), and Toulmin in the recent Encyclopaedia Britannica (15). The thesis that seems to emerge from these writings is that it will be more instructive to view scientific research as a developmental social process rather than to dwell unduly long on the idiosyncrasies of substantive areas. Toulmin concludes his discussion as follows:

> This change of approach...respects the crucial fact, to which attention has been drawn at several points in this present survey, that the distinctive features of science lie not in the types of object and event to which the scientist has access but in the intellectual procedures that his investigations employ and so in the kinds of problem that lend themselves to a scientific solution. (15, p.393)

Again there are shifts and recurring themes about what that intellectual approach is and should be. If we define an "ideology" as a rather widely shared belief about what certain phenomena are and should be, then we can identify certain ideological shifts regarding the nature of scientific research. One of those has been reflected in the contrasts between rationalists and romanticists. In the early nineteenth century there were romantics calling for "science for the people" as there has been in recent years again. In educational ideological positions with respect to service and teaching affect the research ideology as Hills has pointed out (8).

It does appear that the belief in an ordered world in which dependable relationships could be identified and counted upon is an image that draws upon the Greek conception of fate in tragedy and the Roman codification of law. Thus the modern world inherited an image of a "lawful" universe. It also appears that an early corrective to the highly rationalistic Greek approach came through the emphasis upon experience and observation reflected in Gothic architecture, the Troubadours and such writers as Machievelli. Some will contend, as did Whitehead, that the emphasis upon direct observation, as a corrective for excessive rationality, was very much needed but did, in its turn, become such a dominant influence in science that it became largely anti-rationalistic, distrusting ideas as getting in the way of unbiassed observation. Thus Newton, despite the abstract conceptions and mathematical analysis behind his conclusions, made the widely quoted contention: "Hypotheses non fingo" (I frame no hypotheses). Nietzsche touched upon the error of separating so sharply idea and observation when he identified the fallacy of the "immaculate perception". Whitehead, in Science and the Modern World, seeks a formulation that brings together "dispassionate observation" and "schemes of abstraction" based upon experience (17, p.30). A similar reconciliation between basic definition within an ordered conception and its conceptual relationship to operational definition through "epistemic correlation" is formulated in Northrop (13).

This longstanding dichotomy between abstract conception and concrete observation seems to have been rather clearly established in the course of the Greek experience, possibly with major assistance from the Pythagoreans. By the Middle Ages the distinction between theory and practice was clearly made, for example, in the "Iconologia di Cesare Ripa" (fl. 1600) where it was explicitly related to the

Pythagoreans. In 1793 Immanuel Kant, writing on Theory and Practice Concerning the Common Saying: This May Be True In Theory But Does Not Apply to Practice, was very direct in his criticism:

> Everyone would ridicule an empirical machinist who denounced general mechanics or an artilleryman who denounced the mathematical doctrine of ballistics, by declaring that they might be skillfully conceived but that it did not apply to practice because the execution (of these tasks) produced very different results from what the theory suggested. (10, p.413)

This rent in the fabric of science in modern times finds its way into ideologies about the nature of science and research resulting in contending camps that seeks to separate "pure" and "applied" research, "theoretical" and "empirical" studies and "academic" and "professional" undertakings. This dichotomy has been a recurrent theme in discussions of research in educational administration in the United States.

While the "jet stream" component of the scientific tradition stems from Greek and Medieval times achieving a nexus in early modern times, it appears that research in the sense that we know it was associated with the rapid changes in recent centuries. The root idea of "search" (from the same source as 'circus') was "to explore or examine thoroughly" (OED). By the seventeenth and eighteenth centuries it had taken on the meaning of "a search or investigation directed to the discovery of some fact by careful consideration or study of a subject" (OED). During the eighteenth and nineteenth centuries science came to be thought of as "a branch of study which is connected either with a connected body of demonstrated truths or with observed facts systematically classified and more or less colligated by being brought under general laws, and which includes trustworthy methods for the discovery of new truths within its own domain" (OED). Thus, by the nineteenth century it was possible to speak of "scientific research". At that time usage was limited primarily to natural or physical science. "Classical" analytic methods were extended to social and personal phenomena by the latter part of the last century and have grown exponentially during the twentieth century including invention of the term "behavioral science" by James Miller. Miller further contends (Behavioral Science, Vol. 19, No. 1, Jan. 1973, p. 2) that a further major change occurred in science about the time of World War II associated with development of the concepts of interaction, reaction and goal-seeking systems. If so, the middle of the present century was something of a turning point in the sceintific "jetstream" of modern times.

Emergence of institutionalized scientific research during the last few centuries has been largely concomitant with the development of the Industrial and Scientific Revolutions. The emergence of new professions was also associated with the Scientific Revolution:

> The rise of new professions based upon intellectual techniques is due to the revolution brought about by the work of the engineers and thus indirectly to the coming of science. (4 p. 297)

The temporal association of the development of science and the professions has its conceptual roots in the definition of a profession as "A vocation in which a professed body of knowledge of some department of learning or science is used in its application to the affairs of others or in the practice of an art founded upon it." (OED) The formation of societies had already taken shape in science, e.g., the chartering of the Royal Society in 1662. Emergence of the professions also took on identity through formation of Study societies as a means of establishing contact with growing knowledge later expanding to interests in professional competence, honor and material interests. The Royal College of Surgeons was formed in 1800. A society for Associated Teachers was organized in New York in 1794. By mid-century such societies were being formed throughout the world; the National Teachers' Association in the U. S. in 1857, the General Association of Danish Teachers in 1841, the National Union of Elementary Teachers in England in 1870 are examples. School superintendents formed a national association in the U. S. in 1866. In 1915 the Association of Directors of Educational Research was organized, later becoming the American Educational Research Association. In 1947 the National Conference of Professors of Educational Administration was organized.

A typical early development in the growth of a society was publication of a journal through which experience, methods and knowledge could be shared. Thus during the nineteenth century in the United States along with other parts of the world there emerged learned and professional societies with their journals. This criterion will be returned to later.

Educational research was rather late in taking on such a collective identity. Regular publication of the Review of Educational Research (1) began in 1931; the third issue (June 1931) was devoted to educational administration. The Review continued to be focussed upon fields of research until 1970 with the last such review of educational administration appearing in 1967. While there was a stated intent to publish annual reviews of research, they have not materialized. At the 1974 annual meeting of the Educational Administration section of AERA, the section made plans to initiate regular reviews of research in this field.

Reference has already been made to a rather critical shift in the field of science about the time of World War II and the emergence of emphasis upon behavioral sciences. That shift together with Kellogg Foundation support for the Cooperative Program in Educational Administration operating through eight universities resulted in a marked shift in research in educational administration. The shift was recognized in the Introduction to the 1955 Review of Educational Research:

> The relatively new socio-psychological orientation of research in educational administration has been influenced by several factors. Among the most important of these are: (a) reports of studies made by psychologists and sociologists in industry, government and the military services; (b) the growing recognition of the importance of the "human element" to the effectiveness of administration; and (c) the interdisciplinary approach adopted by the Cooperative Program in Educational Administration... (1, Vol. XXV, No. 4, Oct. 1955, p. 279)

This overview of trends in the larger field of science sets a background for developments in educational administration during approximately the last quarter century. A framework for analysis of these trends will now be proposed as a basis for analysis of developments of the last quarter century and of speculating briefly about the immediate future.

Proposed Analytic Framework

In recent years analysis of the nature of scientific development has been pursued by such writers as Northrop (13) and Kuhn (11). Northrop's analysis of stages of inquiry tends to focus the study of particular problems by identification of (1) problem statement, (2) the natural history stage and (3) the stage of deductively formulated theory. Kuhn has identified a pre-paradigm period followed by the paradigm period which may in turn become a pre-period for the emergence of other paradigms. In the Postscript to the second edition (11, pp. 174-210) Kuhn identifies what he calls the 'disciplinary matrix' which includes certain symbolic generalizations, certain beliefs, values and exemplars. It appears that the matrix is a broadly shared set of beliefs about the field and, as such, might be called, in the sense already identified, an ideology of the field. Such beliefs are distinguished from the more restricted theory, model or paradigm that serves to guide scientific investigation of scholars in the field. Kuhn also distinguishes among emergence of community, transition and the period of concensus on "paradigms" of the field. Clearly Kuhn has in mind a continuous social process in which ideas flow and ebb. Periods are useful for analytic purposes but the process itself is in no way segmented.

It may be that the basic process involved here is one of maturation of a profession, field or discipline. Usage of the words research and science appears to involve a transition from simple descriptive experience to a stage where observed facts are "systematically classified" through the use of "intellectual techniques", "schemes of abstraction", or "paradigms". It seems useful, then, to distinguish among (1) the period of emergence of community, (2) the transition period and (3) the period of maturity. It appears that those stages (they are bound, as already pointed out, to be analytically arbitrary to a degree without clear demarcations in real time) may be characterized along the following lines:

COMMUNITY DEVELOPMENT	TRANSITION	MATURITY
Emergence of groupings	Reduction of groups approaching one	Recognized intellectual techniques
Variety of groupings	Increasing consensus	Conscious transmission to students
Lack of consensus on generalizations, beliefs, values, etc.	Development of community media	Community validation through community media
Emphasis upon direct observation, cases, etc.	Reduction of diversity in definition, etc.	Intellectual technique replacement
	Growing emphasis upon intellectual techniques	

The analysis to this point has indicated a general thrust or "jetstream" in the development of science in modern times within which the emergence of research in educational administration is a basically contemporary phenomenon that mirrors trends that had already become apparent. Emergence of a research community in education in the United States occurred in the second quarter of the present century from which emerged the basis for a research community in educational administration that took shape by the end of that period signalled by the organization of the National Conference of Professors of Educational Administration. It was organized initially at a meeting of the American Association School Administrators indicative of a tradition of association with the practice of school administration. The Review of Educational Research already provided a form of community research synthesis under the control of a larger grouping. For rough analytic purposes it is assumed that the pre-1950 period can usefully be designated as the community development period. The transition period is seen as that since 1950 to the present. It will be contended that current developments are in some ways indicative of growing readiness for a stage of maturity.

Transition Period (1950 - present and beyond)

The transitory nature of affairs in educational administration in the period immediately after 1950 has been widely recognized. Reference has already been made to the Introduction to the 1955 Review of Educational Research in which the new trend was identified and some of the concomitant conditions cited. Gregg, writing on "Preparation of Administrators" in the 1969 Fourth Edition of the Encyclopedia of Educational Research wrote: "The decade of the 1950's, particularly, was one of much ferment in the study of administration." (5, p.994) In the same article Gregg went on to say: "The field of educational administration has not been distinguished by its research, whether done by students or by professors."

In this early stage of maturation it could be expected that there would be a relatively strong emphasis upon data collection for descriptive purposes. Two such modes might be cases and field studies. The use of cases has been broadened greatly during the transition period; however, the emphasis has been almost exclusively on use for teaching rather than for research purposes. Case Studies in Educational Administration: An Information Storage and Retrieval System, published in 1965 by the University Council for Educational Administration suggests a move toward research potential; however, the Introduction continues the teaching emphasis: "We believe that this system will provide the professor of educational administration with the necessary tools for locating, in a reasonable period of time, case studies useful in a particular teaching situation (9, p. i). Field studies have also been used primarily for teaching purposes with a strong emphasis upon service to the field. Thus there was a major element of factual-normative data collection directed toward the practicalities of decision making. Illustrative of efforts at a more research oriented analysis are Griffiths et at., "Teacher Mobility in New York City" (6) and Willower, "Hypotheses on the School as a Social System" (18). On the whole, however, cases and field studies have not emphasized empirical data for research purposes.

At the same time there was emerging a concern for the use of theory in research. For the first time the Review of 1958 contained a chapter on administrative theory. In 1956 the Administrative Science Quarterly commenced publication. At about the same time publications on theory by Coladarci and Getzels (1955), Halpin (1958) and Griffiths (1959) indicated an emergent trend toward use of intellectual techniques within the field. As such, the set of events could be viewed as a bellwether in the transition from the early stage toward a more mature scientific status. The Review again in 1961 included a chapter on the relationship of theory to research. This trend emerged again in the Review of 1964 in a chapter on the "science of administration" in which the straight forward claim was made: "A science of administration is emerging". (1, Vol. XXXIV, No. 4, Oct. 1964, p. 485)

The last Review (1967) to appear did not include a chapter with a title that dealt with theory or science. In the Foreword, Ericson contended: "The erstwhile search for 'administrative theory', for example, seems virtually abandoned today..." (1, Vol. XXXVII, No. 4, Oct. 1967, p. 376) In the 1964 Review, Lipham had already sensed a change in the theory movement and had cast it in rather more positive terms: "It is probably accurate to conclude that during the past several years there has been substantially less theorizing about theory and considerably more application of existing behavioral science theories, particularly social systems theory, to the problems of educational administration." (1, 1964, p. 450) If such were indeed the case and if one of Kuhn's criteria of maturity, namely, acquisition of paradigms that identify challenging puzzles and supply clues to their solution (11, p. 179) then one might speculate about emergence from transition to maturity. However, in 1970 Halpin contended that the theory movement had fizzled (3, p. 2). In the absence of reviews of research in educational administration since 1967 the trend is somewhat obscure. It is still moot whether the theory movement has been incorporated into the fabric of research or whether it has aborted. Probably the answer is somewhere in between.

Each of the reviews of research during this transition period has registered dismay at the quality of research being undertaken in educational administration, particularly the theoretical shortcomings and lack of consensus on definition. It has been pointed out that Gregg reiterated that position in 1969. The recent study by Campbell and Newell reaches a similar conclusion: "Professors of educational administration engage in many activities, but they appear to have little time for, or inclination toward research." (3, p. 138)

Much of the above alludes to an immature but maturing field. One of the indicators of transition toward maturity has been noted as the development of media of communication within the research field. The University Council for Educational Administration emerged in the later fifties and took on increasing vigor in the sixties. Also during the sixties, educational administration took on a clearer research identity through becoming a Division within the American Educational Research Association. In 1965, UCEA commenced publication of the Educational Administration Journal and started publication of Educational Administration Abstracts the following year. These developments may be seen as further maturing of the research cummunity. At the 1974 annual meeting of the educational administration

division of AERA the decision was made to reinstitute regular reviews of research in educational administration. In the Presidential Address at the 1974 annual meeting of UCEA, Willower stated that during recent years, roughly that characterized here as the transition period, "...we got what science commonly confers: some frameworks that varied in scope and coherence but were at least directed toward explanation, some tentative conclusions that denied the quest for certainty and remained open to correction and revision, and a greater incidence, if not a wide acceptance, of a probing, critical stance devoted to the question, why?!" (16, p.1) He went on to call for an initiative through UCEA to further the development of knowledge. The study by Campbell and Newell reports a clearly identifyable group of professors whom they designate as purist-researchers (3, p. 99) who are part of a larger research-oriented group of "cosmopolitans" that make up about one-fifth of professors. In sum, the above seems to indicate that media have been institutionalized, that further thrusts are being initiated and that there is a core of professors with commitment to maturing of the field. One is tempted to speculate that the field is nearing the interface between transition and the early stages of achieved maturity.

Current Research Emphases

Recent policy priorities have tended to be reflected in the research that has appeared. Concern for equal educational opportunity has been associated with studies of financing, productivity and ways of equalizing financing and benefits. The following are illustrative of this emphasis: research applications in budgeting (programmed budgeting, PPBS), in person-organization relationships (organizational development), planning and accountability together with performance appraisal. There continues to be a number of studies that treat variables in person-organization relationships particularly in relation to bureaucratic status, degree of participation in decision making. Some attention has been given to belief systems (ideologies) as a way of explaining organizational behavior.

For a field in which administrative courses of action are bound to be of critical importance, the absence of longitudinal studies is noticeable. Perhaps related is the relative absence of systematic analysis of policy and planning processes.

It has been contended that an indicator of maturation is attention to intellectual techniques for purposes of analysis. The University Council for Educational Administration is in the process of publishing Futurism in Education (Stephen Hencley and James Yates, editors) a book of "analytics" that provide various techniques that lend themselves to forcasting and longitudinal analysis. Included are:

Trend Analysis - Daniel Brown, SUNY-Buffalo
Monte Carlo Technique - James Bruno, UCLA
Decision Matrices - James Cleary, University of Georgia
Technological Assessment - Vary Coates, George Washington University
Force Analysis - Lawrence Haskew, University of Texas

Contextual Mapping - Stephen Hencley, University of Utah
Cross Impact Matrix - DeLayne Hudspeth, Ohio State
Morphological Research - Fred Ignatovich, Michigan State
Relevance Trees - J. H. McGrath, Illinois State University
Markhov Chain - James McNamara, Texas A. and M.
Scenario Writing - Daniel Sage, Syracuse University
Bayesian Models - Kenneth Tanner, University of Tennessee
Aeriole Technique - Francis Thiemann, University of Oregon
Delphi Technique - Richard Weatherman, University of Minnesota

Brown in a recent analysis of studies reported in the Educational Administration Quarterly and Administrator's Notebook distinguishing between those which use "hard" and "soft" theory and those using "hard" and "soft" data (2). He came to the conclusion that 96 out of 175 studies (55%) fell in the category of soft data and soft theory while two studies (.01%) could be placed in the hard data - hard theory classification. Perhaps of more significance within the present analysis is the fact that the next frequency (28 or 17%) was soft theory - hard data. Such a pattern would seem to be consistent with a transitional field where theory has only recently been emerging and its use is increasingly being tested against data.

Shibles, in a recent review of educational research, saw the following emerging lines of research: special education research, behavior modification, evaluation and operations research.

It would be highly appropriate to be able to report a quantitative trend analysis of literature on research in educational administration which would identify in more specific terms the emergence and waning of ideas and methods in this field. Thus it would be possible to trace with some greater precision the diffusion of intellectual techniques. Its absence is a major weakness of this paper. Brown's article (2) is a step in the direction being suggested. Such quantitative analysis could cast light on the status of diffusion of theory, for example, and provide indicators of degrees of maturity.

Summary

This paper has sought to place the contemporary trends in research in educational administration within the longer term trends of modern scientific development. Those trends have been conceptualized in terms growing out of the work of Whitehead, Toulmin, Northrop and, most especially, Kuhn. On the basis of this analysis the field of educational administration is seen as having gone through the stage of community development and is now well into a transition period toward a future status of research which will be characterized by use of intellectual techniques for analysis of interesting problems. It seems clear that the field is still very much in the transition stage with considerable diversity of point of view on the status of the field and diversity with regard to techniques. There does seem to have emerged a consensus on the importance of theory-based research

(although that also comes under question) and there also appears to be growing interest in identification of specific intellectual techniques and their application to data.

As suggested at the opening, this paper is presented in a highly tentative way. The hope is that for some it may be a helpful way to look at where we are and wither we are tending.

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